

CLAIMS

1 1. A method of downloading a file, consisting of a set
2 of components, from a Internet server to an Internet client,
3 comprising the steps of:

4 generating a profile of the file that includes identifying
5 information for each component;

6 initiating a download sequence by which each
7 component is transferred, one-by-one, from the server to the
8 client using an Internet protocol;

9 when the download sequence is complete, reassembling
10 the components into the file using the profile. ^{identifying information in the}

1 2. The method as described in Claim 1 further
2 including the step of:

3 upon interruption of the download sequence, restarting
4 the download sequence with a component affected by the
5 interruption.

1 3. The method as described in Claim 2 wherein any
2 component transferred prior to the interruption is not
3 re-transferred from the server to the client.

1 4. The method as described in Claim 1 wherein the
2 Internet protocol is the File Transfer Protocol (FTP).

1 Sub B2 5. The method as described in Claim 1 wherein the
2 identifying information in the profile for each component

1 includes an identifier, a value indicating a size of the
2 component, and a code uniquely identifying the component.

1 6. The method as described in Claim 5 wherein the
2 code is a cyclic redundancy code.

1 *Sub B3* 7. The method as described in Claim 5 further
2 including the step of verifying that a component transferred
3 to the client is part of the file using the identifying
4 information.

1 8. A method of downloading a file, consisting of a set
2 of components, from a Internet server to an Internet client,
3 comprising the steps of:

4 breaking the file into the set of components;

5 generating a profile of the file that includes identifying
6 information for each component;

7 initiating a download sequence by which each
8 component is transferred, one-by-one, from the server to the
9 client using an Internet protocol;

10 responsive to any interruption of the download
11 sequence, restarting the download sequence with a
12 component affected by the interruption; and

13 when the download sequence is complete, reassembling
14 the components into the file using the profile. *identifying information in the*

1 9. The method as described in Claim 8 wherein the
2 identifying information in the profile for each component

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1 includes an identifier, a value indicating a size of the
2 component, and a code uniquely identifying the component.

1 10. The method as described in Claim 9 wherein the
2 code is a cyclic redundancy code.

1 11. The method as described in Claim 9 further
2 including the step of verifying that a component transferred
3 to the client is part of the file using the identifying
4 information.

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1 *Sub B4* 12. A method of downloading a file, consisting of a set
2 of components, from a Internet server to an Internet client,
3 the file represented by a profile that includes identifying
4 information for the file and for each component thereof,
5 comprising the steps of:

6 initiating a download sequence according to the profile
7 by which each component is transferred, one-by-one, from the
8 server to the client using the Internet File Transfer Protocol
9 (FTP);

10 upon receipt at the client of a component, using the
11 identifying information to verify whether a complete version
12 of the component has been transferred;

13 if the complete version of the component has not been
14 transferred, restarting the download sequence with the
15 component; and

16 when the download sequence is complete, verifying
17 whether a complete version of the file has been transferred
18 using the identifying information for the file;

19 if the complete version of the file has been transferred,
20 reassembling the components into the file.

1 13. The method as described in Claim 12 further
2 including the step of transferring the profile from the server
3 to the client prior to initiating the download sequence.

1 *Sub B5* 14. The method as described in Claim 13 further
2 including the step of re-transferring the profile from the
3 server to the client prior to restarting the download sequence.

1 15. The method as described in Claim 12 wherein the
2 identifying information for the file includes a code uniquely
3 identifying the file.

1 16. The method as described in Claim 15 wherein the
2 code is a cyclic redundancy code.

1 17. A computer program product for use in
2 downloading a file, consisting of a set of components, from a
3 Internet server to an Internet client, the computer program
4 product comprising:

5 a computer-readable storage medium having a substrate;
6 and

7 program data encoded in the substrate of the
8 computer-readable storage medium, wherein the program
9 data comprises:

10 means for generating a profile that includes
11 identifying information for the file and for each
12 component thereof,

13 means for initiating a download sequence by which
14 each component is transferred, one-by-one, from the
15 server to the client using an Internet protocol;

16 means responsive to any interruption of the
17 download sequence, for restarting the download
18 sequence with the component affected by the
19 interruption; and

1 means responsive to completion of the download
2 sequence for reassembling the components into the file
3 using the ^{identifying information in the} profile.

1 18. The computer program product as described in
2 Claim 17 wherein the program data further includes means for
3 breaking the file into the set of components.

1 19. The computer program product as described in
2 Claim 17 wherein the program data further includes means for
3 transferring the profile from the server to the client prior to
4 initiating the download sequence.

1 20. The computer program product as described in
2 Claim 19 wherein the program data further includes means for
3 retransferring the profile from the server to the client prior to
4 restarting the download sequence.

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21. A computer program product for use in downloading a file from a Internet server to an Internet client, the computer program product comprising:

a computer-readable storage medium having a substrate;
and

program data encoded in the substrate of the computer-readable storage medium, wherein the program data comprises:

means for breaking the file into a set of components;

means for generating a profile that includes identifying information for the file and for each component thereof,

means for transferring the profile from the server to the client;

means for initiating a download sequence according to the profile by which each component is transferred, one-by-one, from the server to the client using an Internet protocol;

means responsive to any interruption of the download sequence for retransferring the profile from the server to the client and restarting the download sequence with the component affected by the interruption; and

means responsive to completion of the download sequence for reassembling the components into the file using the retransferred profile.

1 22. A client computer connectable to the Internet,
2 comprising:

3 a processor;

4 an operating system;

5 Internet protocol means; and

6 a client component of a file transfer download routine,
7 the client component having an associated server component
8 supported on a server; wherein the client component of the
9 file transfer download routine includes means responsive to
10 receipt of component pieces of a file for reassembling
11 component pieces into the file using a file profile.

1 23. The client computer as described in Claim 22
2 wherein the Internet protocol means is FTP.

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1 24. A server computer connectable to the Internet,
2 comprising:

3 a processor;

4 an operating system;

5 Internet protocol means; and

6 a server component of a file transfer download routine,
7 the server component having an associated client component
8 supported on a client machine; wherein the server component
9 includes means for initiating a download sequence by which
10 components of a file are transferred, one-by-one, from the
11 server computer to the client machine using the Internet
12 protocol means, and means responsive to any interruption of
13 the download sequence for restarting the sequence with the
14 component affected by the interruption.

1 25. The client computer as described in Claim 24
2 wherein the Internet protocol means is FTP.

1 26. A method of downloading a file from a Internet
2 server to an Internet client without action by a user of the
3 Internet client, comprising the steps of:

4 associating the file into a set of components;

5 generating a profile of the file that includes identifying
6 information for each component;

7 initiating a download sequence by which each
8 component is transferred, one-by-one, from the server to the
9 client using an Internet protocol;

10 when the download sequence is complete, reassembling
11 the components into the file using the profile. *identifying information in the*

1 27. The method as described in Claim 26 wherein the
2 components are transferred in a sequential order as
3 determined by the profile. *B*

1 28. The method as described in Claim 26 wherein the
2 components are transferred in a non-sequential order.

1 29. The method as described in Claim 26 wherein the
2 Internet client is a Web appliance.

1 30. The method as described in Claim 23 wherein the
2 file is a updated version of a program running on the Web
3 appliance.

1 *Sub B87* 31. A data processing system, comprising:
2 a remote control unit; and
3 a base unit connectable to a monitor for providing
4 Internet access under the control of the remote control unit,
5 the base unit comprising:
6 a processor;
7 Internet protocol means; and
8 a client component of a file transfer download
9 routine, the client component having an associated
10 server component supported on a server; wherein the
11 client component of the file transfer download routine
12 is run by the processor and includes means responsive to
13 receipt of component pieces of a file for reassembling
14 component pieces into the file using a file profile.

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